

REVISION OF THE ANT TRIBE DACETINI: V.¹ THE DELIMITATION OF ARNOLDIDRIS NEW GENUS

(HYMENOPTERA: FORMICIDAE)

BY WILLIAM L. BROWN, JR.

The Biological Laboratories, Harvard University

ORECTOGNATHUS Fred. Smith

This genus consists of a few curious species inhabiting the Australasian region. Although I have amassed a considerable amount of taxonomic data on the species, including one or two forms with highly polymorphic workers, a projected trip to Australia for the study of these and other dacetine ants makes postponement of a final taxonomic treatment of *Orectognathus* preferable to an incomplete treatment at this time. There are, however, two quite distinct species-groups within the genus as it has been constituted. One of these groups is restricted, as presently known, entirely to New Guinea; and though I have seen no specimens, the excellent figures of Emery and Szabó allow me to delimit a new genus based on four previously described species.

ARNOLDIDRIS new genus

Slender Papuan species formerly included in, and closely related to, *Orectognathus*, but differing from that genus as presently restricted in the following characters: (worker)

- (1) Promesonotum convex, without spines or dentiform processes.
- (2) Petiole extremely elongate, very slender and gradually tapered anteriorly; node low, not, or very indistinctly, differentiated from its peduncle.
- (3) Propodeal spines extremely elongate, slender and acute, strongly divergent, very nearly as long as, to longer than, the petiole.
- (4) Integument usually in large part smooth and shining, the umbilicate foveolae, when present, restricted in size and distribution.
- (5) Apices of occipital lobes toothed or more or less angulate as seen from lateral view.

¹ Previous parts in this series have appeared as follows: Part I, Mushi, vol. 20, p. 1, 1949; Part II, Trans. Amer. Ent. Soc., LXXVI, p. 27, 1950; Part III, *ibid.*, LXXV, p. 43, 1949; Part IV, *ibid.*, LXXV, p. 83, 1949.

GENOTYPE: *Orectognathus chyseri* Emery, by present designation.

This very well marked genus includes, besides the genotype, three other species originally described as *Orectognathus: biroi* (Szabó), *horvathi* (Szabó) and *longispinosus* (Donisthorpe). All are, so far as is known, confined to New Guinea and closely adjacent islands. It seems apparent that the genus is one derived from the more primitive *Orectognathus*. All four species are apparently quite rare, none having been reported from a second collection, and nothing has been recorded concerning their ethology. The males and females remain unknown.

I have not seen a single specimen referable to this genus, but fortunately three of the species are fairly well described and convincingly figured from dorsal and lateral views by Emery and Szabó, so that distinguishing characters are quite apparent. There remains, however, the possibility that the primitive polymorphic tendencies shown by certain *Orectognathus* species have been retained by one or more *Arnoldidris* species. Should this be demonstrated, certain of the names considered valid here might prove synonymous as representing different worker subcastes of the same polymorphic species. No such polymorphism is clear from the present literature.

The key presented below is taken entirely from the original descriptions and figures, and should therefore be followed with caution. The species *longispinosus* was never figured, and the rather incomplete and vague description requires supplementation.

Key to the Workers of Arnoldidris

1. Occipital lobes posteriorly or posteroventrally carinate, the carina ending in a sharp tooth2
 Occipital lobes posteriorly more or less angulate as seen from the side, but not with a sharp tooth3
2. Alitrunk, middle of head, petiole and postpetiole blackish; gaster, occipital lobes, anterior head and most of appendages brownish-yellow; "smooth and shining, covered with very small scattered punctures"
 longispinosus (Donisthorpe)
 Brownish-yellow, vertex brownish, appendages yellow; gastric dorsum "mate"*horvathi* (Szabó)
3. Epinotal spines and petiole each about as long as the greatest width of the gaster and about twice as long as the width of the propodeum; postpetiole almost twice as long as broad*biroi* (Szabó)

Epinotal spines and petiole each about as long as $\frac{3}{4}$ the greatest width of the gaster and about $1\frac{1}{2}$ times as long as the width of the propodeum; postpetiole only slightly longer than broad

chyzeri (Emery)

Since I have seen no specimens, the species are listed with only the necessary references and other data useful to catalogers. It is probable that the original measurements given for at least some of the species are too low, as is true of other dacetinae descriptions by the same authors. Reprints of Szabó's paper cited below run from pp. 349 to 352, whereas the pagination in the source journal, followed here, runs from pp. 348 to 351.

Arnoldidris horvathi (Szabó)

Orectognathus horvathi Szabó, 1926, Ann. Mus. Nat. Hung., xxiv, pp. 348-350, figs. C, c, worker.

Type locality.—Sattelberg, Huon Gulf, New Guinea (L. Biro).
Type material in the Hungarian National Museum.

Arnoldidris longispinosus (Donisthorpe)

Orectognathus longispinosus Donisthorpe, 1940, Trans. R. Ent. Soc. Lond., xci, pp. 58-59, worker.

Type locality.—Mt. Baduri, 1000 ft., Japen I. [off north coast of Dutch New Guinea] (L. E. Cheesman). *Holotype*, a unique, in the British Museum (Natural History).

Arnoldidris chyzeri (Emery)

Orectognathus chyzeri Emery, 1897, Term. Fuzetek, xx, pp. 571-572, Pl. 14, figs. 1, 2, worker.

Orectognathus chyzeri Emery, 1922, Gen. Ins., Fasc. 174, p. 318, Pl. 7, fig. 1, worker.

Type locality.—Lemien Forest near Berlinhaffe, New Guinea (L. Biro). *Holotype* probably in the Hungarian National Museum, but may be in Emery Coll.

Arnoldidris biroi (Szabó)

Orectognathus biroi Szabó, 1926, Ann. Mus. Nat. Hung., xxiv, p. 350, figs. B, b, worker.

Type locality.—Sattelberg, Huon Gulf, New Guinea (L. Biro).
Type material in the Hungarian National Museum.